

COMPLETE LISTING OF ALL CLAIMS

Kindly amend claim 26 as shown in the listing of claims below. This listing of claims will replace all prior versions, and listings of claims in the application.

1 26. (currently amended) A method for operating a MEMS device having a flap that is
2 movable with respect to a base, the method comprising:
3 applying a pre-bias force to the flap to move the flap at least partially out of contact with
4 an underlying base, wherein the pre-bias force is separate from a force that actuates the
5 flap.

6 27. (original) The method of claim 26, wherein the force produces a biasing torque on the
7 flap to reduce stiction and improve reliability.
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9 28. (original) The method of claim 26, wherein the force produces a biasing torque on the
10 flap to increase switch reliability.

11 29. (original) The method of claim 26 wherein the force is applied by a biasing element
12 chosen from the group consisting of a fixed magnet, current carrying coils, flap torsion
13 springs, magnetic materials, gap-closing electrodes, spring loaded elements, stress bearing
14 materials, piezoelectric elements and thermal bimorph actuators.

1 30. (original) The method of claim 26 wherein the force produces a biasing torque on the
2 flap.

1 31. (original) The method of claim 30 wherein the biasing torque tends to counteract another
2 torque exerted on the flap.

1 32. (original) A microelectromechanical apparatus comprising:
2 a base;
3 a flap having a portion coupled to the base so that the flap is movable out of the plane of
4 the base from a first angular orientation to a second angular orientation;
5 wherein the base has an opening that receives the flap when the flap is in the second
6 angular orientation, the opening having one or more sidewalls, wherein at least one of the
7 sidewalls contacts a portion of the flap such that the flap assumes an orientation

8 substantially parallel to that of the sidewall when the flap is in the second angular
9 orientation;
10 a sidewall electrode disposed in one or more of the sidewalls and
11 means for applying a pre-bias force to the flap to move the flap at least partially out of
12 contact with an underlying base.

1 33. (original) The apparatus of claim 32 wherein the means for applying a force applies a
2 fixed force to the flap.

1 34. (original) The apparatus of claim 32 wherein the means for applying a force is a biasing
2 element chosen from the group consisting of flap torsion springs, magnetic materials,
3 current carrying coils, gap-closing electrodes, spring loaded elements, stress bearing
4 materials, piezoelectric elements and thermal bimorph actuators.

1 35. (original) The apparatus of claim 32 wherein the means for applying a force produces a
2 biasing torque on the flap.

1 36. (original) The apparatus of claim 35 wherein the biasing torque tends to counteract
2 another torque exerted on the flap.

1 37. (original) The apparatus of claims 32 where the base is made from a substrate portion of
2 an SOI (silicon-on-insulator) wafer and the flap is defined from a device layer portion of
3 the SOI wafer.